SMIRNOV, N.A., prof.; DAVIDSON, M.G.; PORADNYA, A.I.; STABNIKOV,
        V.N.; VEBER, M.A.; ZHADOVICH, V.K.; KRUPSKIY,A.S.[deceased];
        MELAMEDOV, N.K.; SERGEYEV, V.V.: Prinimali uchastiye:
        AMMOSOV, N.G., inzh.; AKIMOVA, L.D., kand. tekhn. nauk,
        dots.; FILIPPOV, N.A., inzh., nauchn. red.; SMIRNOV, N.A¦,
        prof., red.; DNEPROVA, N.N., red.izd-va; PUL'KINA, Ye.A.,
        tekhn. red.

        [Technology of building] Tekhnologiia stroitel'nogo proiz-
        vodstva. [By] N.A.Smirnov i dr.  Leningrad, Gosstroiizdat,
        1963.  435 p.                         (MIRA 17:2)

TEODOROVICH, G.I.; MELAMEDOVA, V.S.; PISARENKO, I.A.

Method for diagnostic coloring of ferromagnesia carbonates.
Izv.vys.ucheb.zav.; geol. i razv. 2  no.9:37-44  S  '59.
                                        (MIRA 13:4)

1. Institut geologii i razrabotki goryuchikh iskopayemykh
AN SSSR.
          (Carbonates)

TEODOROVICH, Georgiy Ivanovich; POLONSKAYA, Brungil'da Yakovlevna;
    ANDRIANOVA, Aleksandra Glebovna; MELAMEDOVA, Valentina Semenovna;
    PISARENKO, Irina Aleksandrovna; SHVEDOVA, Tamara Mikhaylovna;
    VARENTSOV, M.I.; otv.red.; SHAPOVALOVA, G.A., red.izd-va; RYLINA,
    Yu.V., tekhn.red.

    [Mineralogical-geochemical facies and conditions of the formation
    of petroleum-producing terrigenous Devonian strata in western
    Bashkiria and eastern Tatarstan] Mineralogo-geokhimicheskie
    fatsii i usloviia obrazovaniia nefteproizvodiashchikh terrigennykh
    otlozhenii devona Zapadnoi Bashkirii i Vostochnoi Tatarii. Moskva,
    Izd-vo Akad.nauk SSSR, 1960.  148 p.

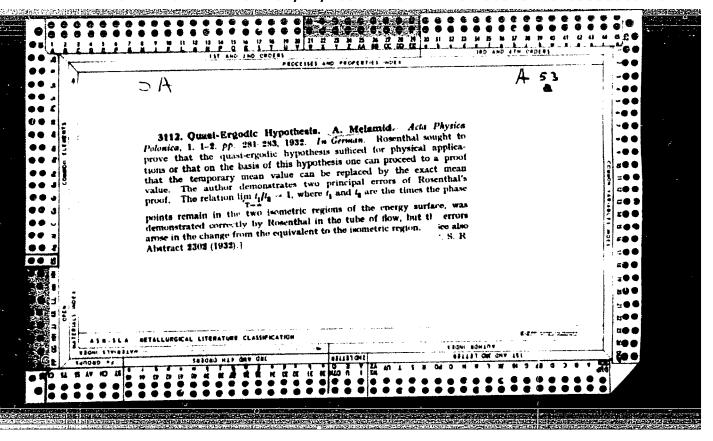                                                    (MIRA 14:3)

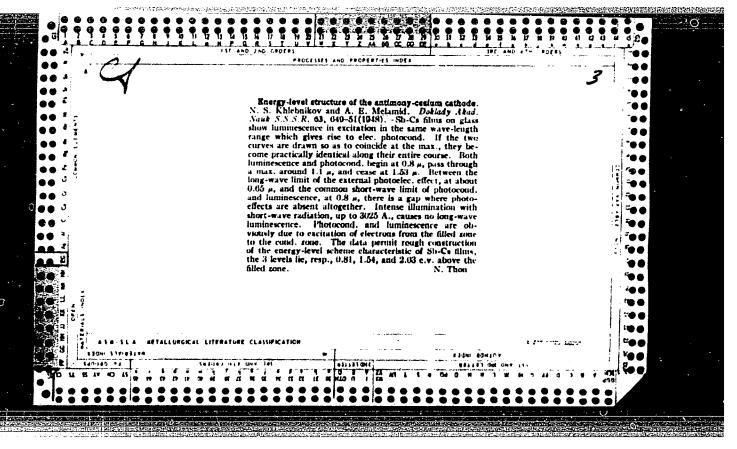    1. Chlen-korrespondent AN SSSR (for Varentsov).
         (Ural-Volga region--Petroleum geology)
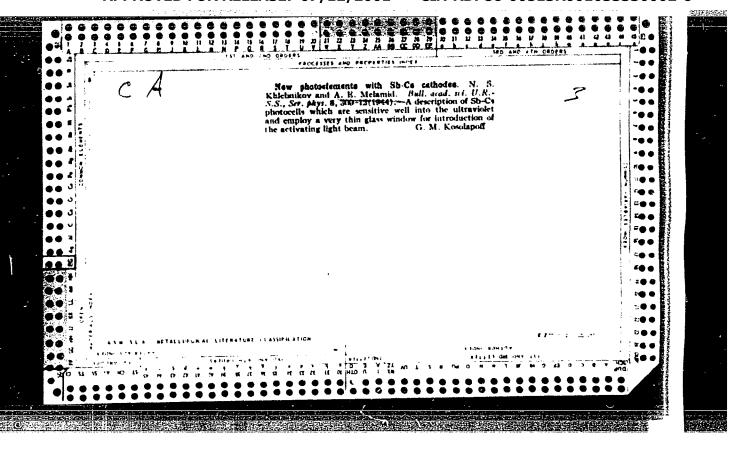
TEODOROVICH, G.I.; PISARENKO, I.A.; MELAMEDOVA, V.S.
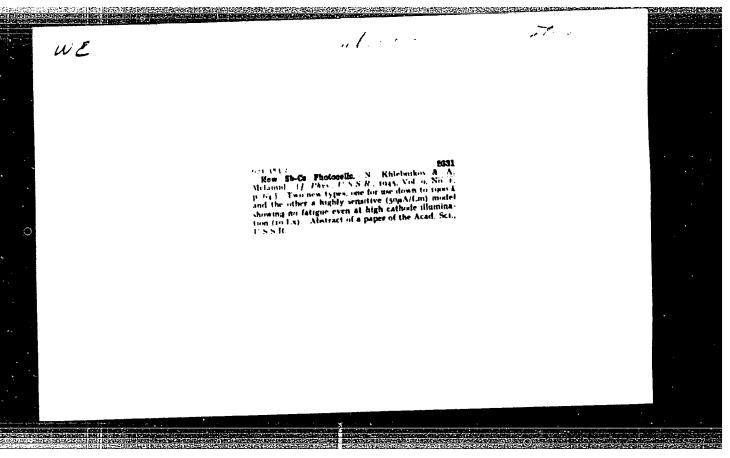
Thermal analysis of iron carbonates. Izv. vys. ucheb. zav.; geol.
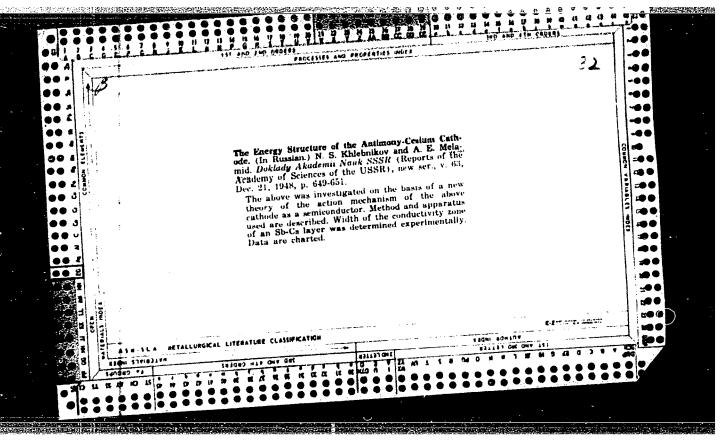i razv. no.11:61-67 N '60.                              (MIRA 14:2)

1. Institut nefti AN SSSR.
       (Rocks, Carbonate—Thermal properties)

ͻ A

A 53

**3112. Quasi-Ergodic Hypothesis.** A. Melamid. *Acta Physica Polonica*, 1, 1-2, pp. 281-283, 1932. *In German.* Rosenthal sought to prove that the quasi-ergodic hypothesis sufficed for physical applications or that on the basis of this hypothesis one can proceed to a proof that the temporary mean value can be replaced by the exact mean value. The author demonstrates two principal errors of Rosenthal's proof. The relation $\lim_{T\to\infty} t_1/t_2 = 1$, where $t_1$ and $t_2$ are the times the phase points remain in the two isometric regions of the energy surface, was demonstrated correctly by Rosenthal in the tube of flow, but the errors arose in the change from the equivalent to the isometric region. [See also Abstract 2302 (1932).] ‒ S. R

**Energy-level structure of the antimony-cesium cathode.**
N. S. Khlebnikov and A. E. Melamid. *Doklady Akad.
Nauk S.S.S.R.* 63, 040-51(1948). - Sb-Cs films on glass
show luminescence in excitation in the same wave-length
range which gives rise to elec. photocond. If the two
curves are drawn so as to coincide at the max., they be-
come practically identical along their entire course. Both
luminescence and photocond. begin at 0.8 $\mu$, pass through
a max. around 1.1 $\mu$, and cease at 1.53 $\mu$. Between the
long-wave limit of the external photoelec. effect, at about
0.65 $\mu$, and the common short-wave limit of photocond.
and luminescence, at 0.8 $\mu$, there is a gap where photo-
effects are absent altogether. Intense illumination with
short-wave radiation, up to 3025 A., causes no long-wave
luminescence. Photocond. and luminescence are ob-
viously due to excitation of electrons from the filled zone
to the cond. zone. The data permit rough construction
of the energy-level scheme characteristic of Sb-Cs films,
the 3 levels lie, resp., 0.81, 1.54, and 2.03 e.v. above the
filled zone. N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

C A

New photoelements with Sb-Cs cathodes. N. S. Khlebnikov and A. E. Melamid. *Bull. acad. sci. U.R.-S.S., Ser. phys.* 8, 300-13(1944).—A description of Sb-Cs photocells which are sensitive well into the ultraviolet and employ a very thin glass window for introduction of the activating light beam.         G. M. Kosolapoff

WE

2031

New Sb-Cs Photocells.  N  Khlebnikov & A.
Melamid  (J  Phys.  U S S R, 1945. Vol 9, No 1,
p 64.)  Two new types, one for use down to type A
and the other a highly sensitive (50μA/Lm) model
showing no fatigue even at high cathode illumina-
tion (10 Lx).  Abstract of a paper of the Acad. Sci.,
U S S R.

The Energy Structure of the Antimony-Cesium Cathode. (In Russian.) N. S. Khlebnikov and A. E. Melamid. *Doklady Akademii Nauk SSSR* (Reports of the Academy of Sciences of the USSR), new ser., v. 63, Dec. 21, 1948, p. 649-651.

The above was investigated on the basis of a new theory of the action mechanism of the above cathode as a semiconductor. Method and apparatus used are described. Width of the conductivity zone of an Sb-Cs layer was determined experimentally. Data are charted.

MELAMID, A. Ye.

"Parameters of Photo-Electron Multipliers and the Methods and the Equipment for their Measurement,"

A conference on Electron and Photo-Electron Multiplier;  Radioteknnika i Elektronika, 1957 Vol. II, No. 12, pp. 1552-1557    (USSR)

Abst:  A conference took place in Moscow during February 2C and March 6, 1957 and was attended by scientists and engineers from Moscow, Leningrad, Kiev and other centres of the Soviet Union.  Altogether, 28 papers were read and discussed.

$M \ e \ lam\dot{a} \ , \ A. \ Ye.$

120-6-2/36

AUTHORS:   Khlebnikov, N.S., and Melamid, A.Ye.

TITLE:     Photo-electron and Electron Multipliers (A Review)
           (Fotoelektronnye i elektronnye umnozhiteli (Obzor)

PERIODICAL:  Pribory i Tekhnika Eksperimenta, 1957, No.6,
             pp. 6 - 18 (USSR).

ABSTRACT:   The review covers the properties and working conditions
     of multipliers used for measuring weak light sources and short
     light pulses produced in the USSR.  First working photo-electron
     multipliers were produced by Kubetskiy (Ref.1) in 1933.  This
     tube was introduced without any substantial changes by RCA in
     1934-1935.  Kubetskiy anticipated most of the other authors, as
     can be seen from Ref.2.  In the forties, it became obvious
     that photo-electron multipliers can be very useful and con-
     venient in the measurement of very weak light sources, e.g. in
     spectroscopy and astronomy.  A new stage in the development of
     these multipliers began in 1947 when Kallman (Ref.4) showed
     that, in conjunction with a phosphor, electron multipliers can
     be used as detectors of radio-activity.  Applications to
     nuclear physics soon followed.  Such multipliers have three
     important properties, namely, high amplification (up to

Card1/3 $10^8$ - $10^9$), very small inertia and proportionality between the

Photo-electron and Electron Multipliers (A Review)     12C-6-2/36

input and output signals over a wide range of inputs.
a) Multipliers used in nuclear physics. Table 1 gives complete
data for 14 multipliers used in scintillation counters. The
photocathode diameters range from 15 to 190 mm and the number
of dynodes from 9 to 13. Both focussed and Venetian blind type
are produced. Amplification factors range from $5 \times 10^4$ to $10^7$ ,
and rise times from $10^{-8}$ to $5 \times 10^{-9}$ secs.
b) multipliers used for weak light sources. Characteristics
of 6 such multipliers are given fully in Table 2. The sensi-
tive areas range from $5 \times 5$ mm$^2$ to $5 \times 16$ mm$^2$. Two multipliers
having sensitive elements of diameter 15 mm are also given.
Sb-Cs, Cs-O-Ag and Sb-Cs photocathodes are employed. Spectral
regions covered lie between 2 000 and 10 000 Å.
c) Electron multipliers. The first practical use of the
secondary electron emission multiplier without a photocathode
was described by Allen (Ref.13). Such multipliers can be used
for counting positive ions in mass-spectrometers. In the Soviet
Union analogous work was carried out by Livshits (Ref.16). The
present authors have investigated various multiplier systems
as well as the following alloys for dynodes: Cu-Be, Cu-Mg,
Card2/3 Cu-Al-Mg, Al-Mg-Si. The latter alloy was finally chosen as the

Photo-electron and Electron Multipliers (A Review).    12C-6-2/36

most convenient technologically.  It is pointed out that it would be very interesting to compare Soviet multipliers with foreign.  Unfortunately, there is almost a total absence of foreign multipliers in the Soviet Union.
There are 11 figures, 2 tables and 17 references, 12 of which are Slavic.

SUBMITTED:   May 20, 1957.

AVAILABLE:   Library of Congress.
Card 3/3

48-1-16/20

AUTHOR:        Melamid, A. Ye.

TITLE:         Production of Photoelectron-Multipliers and Their Ele-
               mentary Parameters (Proizvodstvo fotoelektronnykh umnozhiteley
               i ikh elementarnyye parametry).

ABSTRACT:      By the elementary parameters of the photoelectron-multipliers
               (PV) we understand the parameters dependent on the properties
               of the photocathode, the construction of the electron-optical
               input, the construction and the properties of the dynode-system.
               A short survey of them is given here. They are: the integral
               sensitivity, the quantum yield, the uniformity of the photoca-
               thode-sensitivity, the collection of electrons, the uniformity
               of electron-collection at the first emitter of the dynode sy-
               stem, uniformity of the cathode, amplification-coefficient of
               the dynode-system and the dark current of the PV. It is shown
               that it is not necessary to measure the integral sensitivity in
               the case of PV destined for ordinary scintillation-counters,
               for this is of greater interest for the engineer than for the
               consumer. It is further shown that the activation-process of the
               cathode itself and not the modification of the thickness of the

Card 1/3

Production of Photoelectron-Multipliers and Their                48-1-16/20
Elementary Parameters.

cathode is the cause of the spreading of the amount of quantum
yield and that of the integral sensitivity. It is pointed out
that the amount of the spectrometer resolving power in the PV
depends to a considerable extent on the property of the crystal
used. It is considered more expedient not to carry out control
of the spectrometric resolving power of the PV at the producer
at the radioactive sources and the scintillation-crystals, but
to determine it according to the equivalent light flash. The
measuring method employed for this only differs from that cu-
stomary for such cases by the exchange of the radioactive sour-
ce and the crystal e.g. by a Kerr-cell or by a special elect-
ron-ray tube with a screen and small afterglow. It is shown
that for obtaining the highest degree the collection of elect-
rons in every PV it is necessary to select the optimum voltage-
-values at its focusing electrodes. The amplification coeffi-
cient of the dynode-system is determined by the coefficient of
the secondary emission of the dynode-material. By the dark cur-
rent the current in — the collector-circuit without illuminat-
ion of the photocathode is to be understood in the case of a PV.
Its magnitude consists mainly of 2 components: 1) the leakance
current in the collector-circuit and 2) the amplified current of
the thermoemission from the cathode and chiefly from the first

Card 2/3

On the Production of Photoelectron-Multipliers and Their          48-1-16/2o
Elementary Parameters.

dynodes. For the PV as an element of the scintillation-counter
the second component is the more important one. It depends on
the type of the selected cathode, on the surface of the latter
and on the temperature of the surroundings. Therefore it is ex-
pedient not to give the magnitude of the dark current, but the
number of the dark impulses per minute and the amplitude of the-
se impulses. Finally it is pointed out that the probability of
obtaining the magnitude of the collection of electrons and the u-
niformity of the collection at the first dynode is close to one.
The probability of obtaining optimum values for the quantun yield
is determined by the production method of the cathode. It is
especially emphasized that only in the case of a simultaneous ful-
filment of all demands made on the elementary component of the
PV it is possible really to obtain a so-called spectro-metric ty-
pe of photoelectron-multipliers. In all other cases this can on-
ly be a coincidence. There are 7 figures, 2 tables.

AVAILABLE:      Library of Congress

1.   Secondary emission amplifiers–Production

Card 3/3

SOV/109-4-6-14/27

AUTHORS:    Khlebnikov, N.S. and Melamid, A.Ye.

TITLE:      Energy and Angular Distributions of the Photo-electrons
            from Complex Cathodes (O raspredelenii fotoelektronov
            po energiyam i uglam vylota dlya slozhykh katodov)

ABSTRACT:   The investigation reported in the article was carried
            out during 1950 - 1953 and its aim was to obtain the
            data necessary for the design of an electron-optical
            system employing complex photo cathodes.  The results
            obtained by the authors and their interpretation differ
            from those obtained by later investigators (Refs 1-6).
            The experiments were carried out by employing a
            "sectionalised" spherical condenser having an external
            diameter of 100 mm (Figure 1).  The experimental tube
            containing a spherical condenser was in the form illustrated
            in Figure 2.  The experimental results are shown in
            Figures 3-11.  Figure 3 illustrates the maximum energy of
            the photo-electrons as a function of the quantum energy
            $h\nu$  for two tubes with spherical cathodes ;  Curve 1

Card1/4

SOV/109-4-6-14/27

**Energy and Angular Distributions of the Photo-electrons from Complex Cathodes**

refers to an antinony-caesium cathode, while Curve 2
was taken with an oxygen-silver-caesium cathode.  The
slope of the curves gives the average value of the
Planck constant.  Figure 4 shows that, for both the
above cathodes, the saturation points in the current
curves changed stepwise during the transition from long
to short waves.  The energy distribution of the photo-
electrons in an antimony-caesium cathode, deposited on a
platinum-coated glass sphere, is illustrated in Figure 5;
the curves were taken for the wavelengths ranging from
6200 - 2537 Å.  The angular distribution of the photo-
electrons is illustrated in Figures 7,8 and 9;  the
curves marked '1' were taken with a forward illumination,
while the curves marked '2' were measured with backward
illuminations.  Figure 11 shows the electron energy
distribution of an oxygen-silver-caesium cathode for
the wavelengths ranging from 8000 - 2848 Å .  The above
experimental results are employed to explain the energy
Card2/4     structure of the photo cathodes and to interpret the

SOV/109-4-6-14/27

Energy and Angular Distributions of the Photo-electrons from
Complex Cathodes

    process of production and movement of the photo-electrons
in the emissive layer.  In particular, the experiments
show that the angular distribution of the photo-electrons
is axially symmetrical and consists of two components:
1)  a component having a maximum in the direction normal
to the surface and, 2)  a component having a maximum at
a comparatively large angle.  As regards the energy
structures of an antimony-caesium cathode, the authors'
results indicate that the Burton model (Ref 15) is
incorrect.  The authors express their gratitude to
Ye.P. Yurlova for preparing the experimental equipment.
Note from the editor:  the above  article produced a
number of criticisms (from various sources) relating to
the method of the measurements and the interpretation of
the experimental results.  However, in view of the novelty

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Energy and Angular Distributions of the Photo-electrons from
Complex Cathodes

SOV/109-4-6-14/27

       of the results obtained, the editorial board decided to
publish the paper.  There are 13 figures and
17 references, of which 7 are English and 10 Soviet;
one of the Soviet references is translated from English.

SUBMITTED:    January 15, 1958

Card 4/4

27709
S/120/61/000/003/021/041
E032/E314

9,4160

AUTHORS:     Khlebnikov, N.S., Melamid, A.Ye. and
             Timoshenkov, Yu.A.

TITLE:       A Photomultiplier Sensitive Down to 1 300 Å

PERIODICAL:  Pribory i tekhnika eksperimenta, 1961, No. 3,
             pp. 129 - 131

TEXT:        The shortwave limit of a photomultiplier has been
extended by the present authors by the use of a "wavelength-
shifter", i.e. the short wavelength radiation is converted
into a longer wavelength radiation with the aid of a suitable
phosphor.  It was found that the best results were obtained
with the ЖС-9  (ZhS-9) glass plate, 0.1 mm thick.  Fig. 1
shows the spectral characteristics of the photomultiplier
ФЭУ-Р5 (FEU-R5) with different materials used for the
entrance window.  Curve 1 was obtained with "optical glass
No. 23" and the R5 photomultiplier;  Curve 2 was obtained
with a 1 mm thick, high-quality uviol glass and an ФЭУ-Р3
(FEU-R3) multiplier and curve 3 was obtained with the
ZhS-9 glass (o.1 mm thick) attached with Canada balsam to the
Card 1/3

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S/120/61/000/003/021/041
A Photomultiplier ....          E032/E314

R5 envelope.  Curve 3 could not be extended at the time to below
2 030 Å owing to lack of a suitable monochromator.  However, there
is evidence showing that the sensitivity remains  quite appreciable
down to 1 500 A.  The present authors' recent measurements,
using a vacuum monochromator, have yielded the curve shown in
Fig. 2.  Fig. 4 shows the light output of the ZhS-9 glass as
a function of thickness (mm).
There are 4 figures and 1 table.

SUBMITTED:    August 2, 1960

Card 2/3

*24.6800*

27714
S/120/61/000/003/027/041
E073/E535

AUTHORS:      Yergakov, V.A., Levin, G. E., Melamid, A.Ye.,
              Trebukhovskiy, Yu.V. and Khlebnikov, N.S.

TITLE:        Electron multiplier with an axially symmetrical inlet
              window of 24 cm$^2$ area

PERIODICAL:   Pribory i tekhnika eksperimenta, 1961, No.3, pp.157-158

TEXT:         For recording wide beams of recoil nuclei, electron
multipliers are required with an as large as possible area of the
cathode from which the recorded particles eject electrons. Fig.1
shows a sketch of the electron multiplier.   In this paper an
electron multiplier is described, the cathode of which is in the
shape of a hemisphere of 60 mm diameter with a central opening of
10 mm diameter.  Along the axis a short 6 mm diameter cylinder is
placed which is electrically connected with the first dynode.
In the gap between the cylinder and the edges of the cathode
opening, a ring, with welded on 0.15 mm diameter tungsten wires
which are located along the generating lines of the 8 mm diameter
cylindrical surface inside the cathode cavity, is fixed onto glass
insulators.   A potential slightly higher than the cathode

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Electron multiplier with an axially ... S/120/61/000/003/027/041
E073/E535

potential is fed to the wire "cylinder" and this produces an
additional field that accelerates the electrons which are released
from the cathode surface by the primary particles so that the
collection of electrons from the peripheral regions of the cathode
into the dynode system is considerably improved.  To eliminate
field distortions in the cathode cavity, the inlet window is
covered by a grid to which an independent potential can be fed.
Electrons from the cathode, which come into the near-axial region
of the cathode with only low energies (due to the accelerating
field produced by the wire cylinder), are under the effect of a
strong focusing field of the cylinder of the first dynode which
collects them onto the active part of its surface. Then follows
the ordinary process of multiplication in the dynode system, which
has 17 dynodes instead of the usual 11 in the type $|C$ (1S)
multipliers.  The cathode and the dynodes are made of an Al-Mg
alloy with an addition of silicon with thicknesses of 0.2 mm and
0.1 to 0.12 mm, respectively.   Activation is by alternating
heating in vacuum and in an $O_2$ atmosphere at t $\sim$ 450°C until the
required quantity of oxygen    (4 to 5 $\mu g/cm^2$) is absorbed.  An

Card 2/5

Electron multiplier with an axially ... S/120/61/000/003/027/041
277\14
E073/E535

important advantage of this alloy against other alloys (Ag-Mg, Cu-Mg, Cu-Al-Mg, Cu-Be) is its reactivation after standing in air (heating in vacuo at 340°C for 30-60 min). The operation of an electron multiplier is as follows: onto each section of the cathode a narrow, 8 mm wide, beam of α-particles is directed and the number of pulses at the output is recorded. Fig.3 shows the focusing curves (N - pulses/sec) taken on displacing the source along the cathode diameter. The half-width of the curve equals 55 mm (which coincides with the diameter of the inlet window) but does not change on changing the efficiency of the recording of the α-particles (curves 1, 2 and 3 were recorded for α-particle recording efficiencies of 100, 45 and 19%, respectively). The best amplitude distribution of the pulses (Fig.4) was obtained for the following operating conditions:

| Number of Electrodes | Potential difference, V |
|---|---|
| Grid-cathode | 27 ± 60 ~~15~~ |
| Cathode-wire cylinder | 46 ± 20 |
| Wire cylinder - 1st dynode | 380 ±100 |
| 1st dynode - 2nd dynode | 210 |
| Card 3/5  17th dynode - collector | 210 |

Electron multiplier with an axially ... S/120/61/000/003/027/041
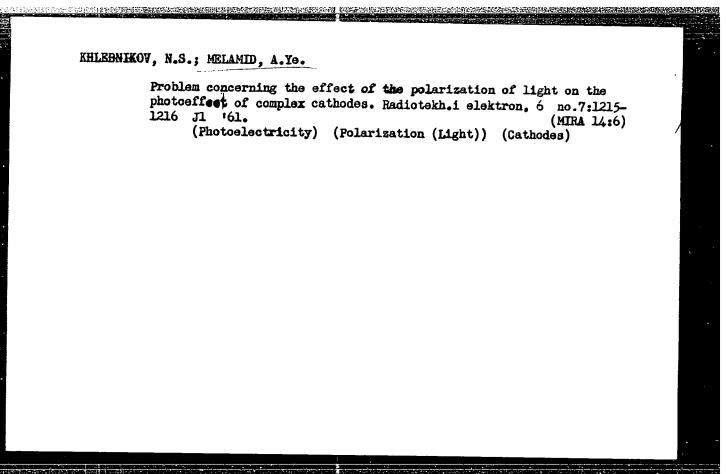                                        E073/E535
                                                                    27714

The authors also investigated the integral amplitude distribution
of the pulses at the output end of the multiplier. Fig.4 shows the
integral amplitude distribution of the pulses of the multiplier for
$\alpha$ and $\beta$ particles; the bias on the discriminator (V) is recorded
on the abscissa whilst on the ordinate the number of pulses per
second N are recorded, the amplitude of which is larger than the
bias voltage (top curve - $\alpha$-particles $Po^{210}$, bottom curve -
$\gamma$-particles $Co^{60}$). The plateau of the counting in the range of
small discriminations is characterized by 100% efficiency of
recording the $\alpha$-particles. The background of the electron multi-
plier for the 70% range of $\alpha$-particle recording is 2 pulses/sec
and in the range of 50% it does not exceed 1.5 pulses/sec.
Ye. P. Yurlova and V. F. Ivanov participated in the design and
building of the multiplier. There are 4 figures.

[Abstractor's Note: Complete translation.]

SUBMITTED:  June 6, 1960

Card 4/5

KHLEBNIKOV, N.S.; MELAMID, A.Ye.

Problem concerning the effect of the polarization of light on the
photoeffect of complex cathodes. Radiotekh.i elektron. 6  no.7:1215-
1216  Jl '61.                                            (MIRA 14:6)
        (Photoelectricity)  (Polarization (Light))  (Cathodes)

S/109/62/007/003/020/029
D246/D302

9.4160 (1138, 1147)

AUTHORS:     Khlebnikov, N.S., Melamid, A.Ye., and Kovaleva, T.A.

TITLE:       Amplitude distribution of output pulses of a photo-
             multiplier

PERIODICAL:  Radiotekhnika i elektronika, v. 7, no. 3, 1962,
             513 – 524

TEXT:  It had been shown theoretically by Janossy (Ref. 1: ZhETF,
1955, 28, 6, 599) that the output pulses of a photomultiplier have
a Poisson distribution. On the other hand some experiments seemed
to prove the contrary. The authors performed carefully prepared ex-
periments to prove the correctness of the former. The precondition
is that only multiplication of single electrons should be measured,
in an ideal vacuum, free of gas phenomena. This was achieved by
specially choosing photomultipliers (about 20) with low background
and a plateau in their characteristics (counts versus overall vol-
tage). The photomultipliers were operated in this middle region,
where all single electrons get multiplied by the tube and gas phe-
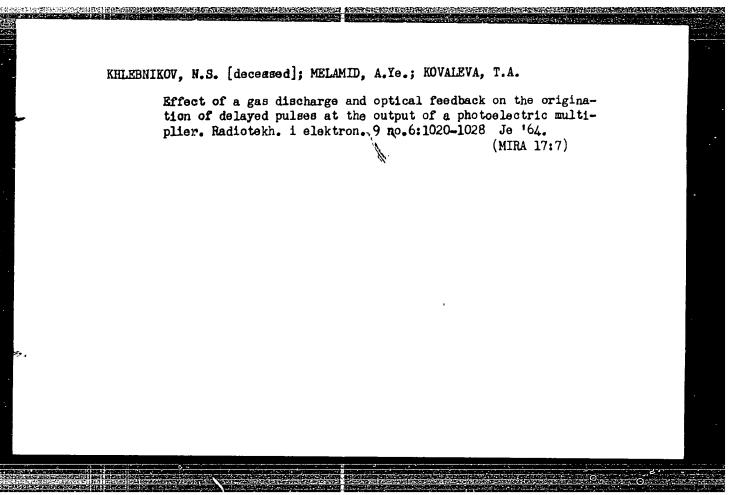
Card 1/2

Amplitude distribution of output ...     S/109/62/007/003/026/029
                                         D246/D302

nomena have very little effect. The latter was measured by two ad-
ditional photomultipliers in a triple coincidence experiment and
found to be ~1%; it was subtracted from the main measurements. To
make sure that only single electrons were multiplied, only thermal
electrons were used. Under these conditions the amplitude distribu-
tion turned out to be Poissonian, even for different secondary
emission coefficients. The authors also confirmed that the pulses     X
of dark current are due to single electrons. Although for cascade
image tubes it was reported to be due to multiple electrons, these
are, according to the authors, the results of more complicated me-
chanism. There are 9 figures and 6 references: 3 Soviet-bloc and 3
non-Soviet-bloc. The references to the English-language publicat-
ions read as follows: J.A. Baicker, IRE Trans. Nucl. Sci., 1960,
NS-7, 2-3, 74; F.J. Lombard, F. Martin, Rev. Sci. Instrum., 1961,
32, 2, 200.

SUBMITTED:    July 17, 1961


Card 2/2

KHLEBNIKOV, N.S. [deceased]; MELAMID, A.Ye.; KOVALEVA, T.A.

Effect of a gas discharge and optical feedback on the origination of delayed pulses at the output of a photoelectric multiplier. Radiotekh. i elektron. 9 no.6:1020-1028 Je '64.

(MIRA 17:7)

L 17013-66   EWT(1)/EWT(m)/EWA(d)/EWP(t)/EWA(h)    IJP(c)   MJW/JD

ACC NR:   AP6001586                 SOURCE CODE:  UR/0120/65/000/006/0167/0169

AUTHOR:  Melamid, A. Ye.; Pakhomov, M. T.

ORG:  none

TITLE:  Small-size photomultiplier with oxygen-silver-cesium photocathode

SOURCE:  Pribory i tekhnika eksperimenta, no. 6, 1965, 167-169

TOPIC TAGS:  photomultiplier

ABSTRACT:  A photomultiplier with high stability and increased threshold sensitivity
is described.  The multiplier consists of a semitransparent oxygen-silver-cesium
photocathode 5 mm in diameter and a multiplying system provided with the dynodes made
of AMGK alloy.  Because of its small dimensions and some design innovations, the
multiplier can withstand impacts up to 50 g  and vibrations up to 1 kc.  In the pro-
duction of the multiplier, special attention was paid not only to the accurate distil-
lation of cesium vapor excess but also to reducing to a minimum the amount of cesium
oxide formed on the dynodes.  Photocathodes with a sensitivity of 20—35 $\mu$amp/lm were
thus produced.  Tests showed an instability of only I 0.3% for six hours of continu-
ous operation at an anode current of 1 $\mu$amp.  A high threshold sensitivity
(6 x $10^{-12}$—2.5 x $10^{-11}$ lm/cps 1/2) was achieved in conjunction with a high infrared
sensitivity.  Threshold sensitivity for an optimum signal-to-noise ratio was at its
maximum at an operating voltage of 1200—1400 v. The multiplier is recommended as a
detector of very weak light flux.  Orig. art. has: 4 figures and 1 table.        [KM]
Card 1/2                            UDC:   621.383.292

L 17013-66

ACC NR: AP6001586

SUB CODE: 20/ SUBM DATE: 11Nov64/ ORIG REF: 003/ OTH REF: 002/ ATD PRESS: 4207

Card 2/2

L 21837-66    EWA(h)/EWT(1)/T    IJP(c)
ACC NR: AP6003556    SOURCE CODE: UR/0109/66/011/001/0094/0102

AUTHOR: Kovaleva, T. A.; Kuptsova, G. Z.; Melamid, A. Ye.

ORG: none

TITLE: Correlations between emission processes in photomultipliers

SOURCE: Radiotekhnika i elektronika, v. 11, no. 1, 1966, 94-102

TOPIC TAGS: photomultiplier, thermionic emission

ABSTRACT: C. Smit et al. (Physica, 1963, 29, 1, 41) assumed that the additional
noise discovered by them in a photomultiplier was due to the flicker effect. Their
conclusion is argued against, and the results of a special investigation of the
additional-noise origin are reported. The number of output dark-current pulses per
10 sec, in a 13-stage Sb-Ce-photocathode multiplier, was counted; the experiment
was repeated 300 times with each tested photomultiplier. An autocorrelation function
of the stationary random process for 0, 30, 40, ... sec was calculated on an
"Ural-2" computer. Also, the frequency composition of the noise was determined.
It is found that: (1) The additional noise at frequencies $10^{-3}$ cps and lower is due to

UDC: 621.383:292

Card 1/2

L 21837-66

ACC NR: AP6003556

O

gas-discharge processes transpiring in the photomultiplier; this is corroborated by (a) disappearance of the additional noise upon a multiplier aging (hardening) and (b) nondetection of this noise when the resolution time of the measuring equipment was increased up to 200 microsec; (2) The above infralow frequencies indicate that the additional noise is due to slow fluctuation of the equilibrium pressure of residual gases in the multiplier, which is connected with the development of gas-discharge processes. Orig. art. has: 6 figures, 7 formulas, and 3 tables.

SUB CODE: 09 / SUBM DATE: 22Sep64 / ORIG REF: 006 / OTH REF: 001

Card 2/2     ast

KOVALEV, T.A.; KUPTSOVA, G.Z.; MELAMID, A.Ye

Effect of the aging process of a photoelectric multiplier on the power and spectrum of noises. Radiotekh. i elektron. 11 no.1:161-162 Ja '66.     (MIRA 19:1)

1. Submitted September 25, 1964.

L 39544-66    EWT(1)/EEC(k)-2    GD

ACC NR: AP6008299          SOURCE CODE: UR/0109/66/011/003/0568/0571

AUTHOR: Kovaleva, T. A.; Kuptsova, G. Z.; Melamid, A. Ye.

ORG: none

TITLE: Calculating the threshold sensitivity of multiplier phototubes

SOURCE: Radiotekhnika i elektronika, v. 11, no. 3, 1966, 568-571

TOPIC TAGS: multiplier phototube, photomultiplier

ABSTRACT: H. Bosc (Onde electr., 1963, v. 43, 436-437, 738) and G. F. Flint (IEEE Trans., 1964, MIL-8, 4, 22) suggested a method for calculating the threshold signal with an allowance for the statistical properties of the input signal and photocathode emission. However, these initial distributions are distorted by the fluctuation of instantaneous values of the secondary-emission ratio of dynodes. The present article offers a calculation of the threshold sensitivity with an

Card 1/2                              UDC: 621.383.292.001.24

L 39544-66
ACC NR: AP6008299

allowance for the statistical nature of the multiplication process: the amplitude
distributions (of the photomultiplier output pulses) due to signal and noise radiation
are taken into account. These assumptions have been made: (a) Poisson-law
probability of occurrence of photons on the photocathode; (b) binomial-law proba-
bility of emergence of photo electrons from the cathode; (c) Poisson-law proba-
bility of emergence of secondary electrons caused by a primary electron hitting
the dynode; (d) only the distributions after the first dynode are taken into account.
The amplitude distributions have been calculated by the method of generating
functions. It is found that the difference between the threshold signals calculated
by the above method and the Bosc and Flint method may reach high values (32%)
depending on the secondary-emission ratio involved. Orig. art. has: 3 figures
and 3 formulas.

SUB CODE: 09 / SUBM DATE: 08Apr65 / ORIG REF: 000 / OTH REF: 007

Card 2/2

MELAMID, A.Ye.; KHLEBNIKOV, N.S. [deceased]

Interference method for studying complex photocathodes.
Radiotekh. i elektron. 9 no.6:1001-1008  Je '64.

Optical constants ~· ·    ~ ~*~~~teristi~~ ~*~ ~~~~~lax photo-
cathodes    Ibid.:1009-1019                    (MIRA 17:7)

ACCESSION NR: AP4040912                 S/0109/64/009/006/1020/1028

AUTHOR: Khlebnikov, N. S.; Melamid, A. Ye.; Kovaleva, T. A.

TITLE: Effect of the gas discharge and optical feedback on the production of afterpulses at the output of a multiplier phototube

SOURCE: Radiotekhnika i elektronika, v. 9, no. 6, 1964, 1020-1028

TOPIC TAGS: phototube, multiplier phototube, phototube afterpulse, FEU-1S phototube

ABSTRACT: Afterpulses, which occur at the output of a phototube operating at a sufficiently high supply voltage, cause an increase in the total number of pulses and distort their amplitude distribution. The afterpulses are generated by the glow of the gas discharge in the last-dynode-collector gap, which causes an optical feedback from the phototube output to its photocathode. The afterpulses were experimentally studied on a hookup consisting of an FEU-1S-equivalent

Card 1/2

ACCESSION NR: AP4040912

phototube, a broadband amplifier, an electronic oscillograph, and a movie
camera; 720 and 380 measurements were made at 1.6 and 2.1 kv, respectively.
It was found that the distribution of the probability of afterpulses can be described
by this formula: $P(i) = A^i (1-A)$, where $A^i$ is the average number of electrons
emitted by the photocathode in the i-th avalanche. Afterpulses may be eliminated
from the record by increasing the resolving time of the scaler. Orig. art. has:
9 figures and 7 formulas.

ASSOCIATION: none

SUBMITTED: 26Apr63                          ENCL: 00

SUB CODE: EC              NO REF SOV: 004          OTHER: 004

Card 2/2

MELAMID, D. Ye.

*Historical*

Dissertation defended for the degree of Doctor of Economic Sciences in the Institute of World Economics and International Relations

"Political Crisis of the Fascist Regime and the Plot of 20 July 1944 in Germany."

Vestnik Akad. Nauk, No 4, 1963, pp 119-145

MELAMID, Z

OFORMLENIYE RASCHETNYKH I KREDITNYKH OPERATSIY KOLKHOZO. CHEREZ BANK: POSOBIYE DLYA
PREDSEDATE LEY I SCHETNYKH RABOTNIKOV KOLKHOZOV.  SOSTAVLENO Z MELAMUDOM I N. OVCHIN
NIKO.YM.  MOSKVA  GOSFINIZDAT,  1953  57 p.

MELAMUD, A.A., assistent

Study of vitamin A by adaptometry in hypertension. Nauch.trudy
L'vov.obl.terap.ob-va no.1:194-196 '61.          (MIRA 16:5)

1. Kafedra gospital'noy terapii L'vovskogo meditsinskogo instituta
(zav. kafedroy - dotsent I.I. Markov).
        (HYPERTENSION)  (VITAMINS---A)  (NIGHT DIVISION)

MELAMUD, A. YA.

PA 241T32

USSR/Geophysics - Seismic Apparatus        Jan/Feb 53

"Checking the Sensitivity of Seismic Apparatus,"
A. Ya. Melamud, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 1, pp 33-40

Describes two methods for checking the sensitivity
of seismic apparatus: 1) checking  of sensitivity
of the entire channel and 2) checking of the sen-
sitivity of the channel of the apparatus without
taking into account the sensitivity of seismographs.
State that the two methods simplify field observa-
tions.

241T32

/Ie4__ n'ild .4 ; ,

AUTHORS: Khudzinskiy, L. L. and Melamud, A. Ya.         49-9-2/13

TITLE:   Station for frequency analysis of seismic oscillations.
         (Stantsiya chastotnogo analiza seysmicneskikh kolebaniy).

ABSTRACT: In November, 1953 the seismic prospecting division of the
         Geophysics Institute, Ac.Sc. (Geofizicheskiy Institut
         AN SSSR) started developing apparatus for frequency analysis
         of seismic waves under field conditions; this work was
         completed two years later and the thus produced station
         for frequency analysis was tested under field conditions
         in 1955.  The results were described at an All Union
         conference of geophysicists of the Ministry of the Oil
         Industry (Ministerstvo Neftyanoy Promyshlennosti SSSR)
         in November, 1955 during which it was recommended that this
         apparatus should be subjected to industrial tests.  In this
         paper the above mentioned apparatus is described and also
         the results of some field tests obtained with this apparatus.
         Problems relating to the methods and accuracy of frequency
         analysis are dealt with, emphasizing that successive
         analysis under impulse conditions has the advantage against
Card 1/3 si...l'·neous and successive analysis under harmonic

Station for frequency analysis of seismic oscillations. 49-9-2/13

conditions that it permits obtaining the limit of detail of the spectra depending on the width of the pass band of the resonator. After discussing briefly the present state of frequency analysis of seismic waves, the authors describe the apparatus of a station for frequency analysis showing in Fig.2 a circuit diagram of the wide pass band amplifier of a frequency analysis seismic station. Fig.3 shows a sketch of the optical system used in the oscillograph for recording oscillations by the method of variable width and in Fig.6 a sketch of the optical system of the section for photographic recording is given. Fig.5 gives the frequency characteristics of the recording canal of the apparatus with seismographs of certain types, whilst Fig.7 gives the schematic circuit diagram of the analysing equipment. An example of a seismogram obtained in a frequency analysis station is given in Fig.4 (plate facing p.1112). A detailed description is given of apparatus for frequency analysis of seismic waves under impulse conditions in the frequency range of 10 to 250 c.p.s. This apparatus can also be used for analysis under harmonic conditions and it is suitable for work under field conditions. It is simple
Card 2/3 and stable in operation. Since it enables recording by the

Station for frequency analysis of seismic oscillations.    49-9-2/13
         method of variable width directly on a seismogram, it
         permits use of ordinary seismic apparatus for frequency
         analysis without appreciable modifications.  The apparatus
         developed for frequency analysis of seismic oscillations
         can be used as an individual station and also as an
         addition to an ordinary seismic prospecting station.
         There are 14 figures and 21 references, 19 of which are
         Slavic.

SUBMITTED: December 17, 1956.

ASSOCIATION: Ac.Sc. U.S.S.R. Institute of Physics of the Earth.
         (Akademiya Nauk SSSR Institut Fiziki Zemli).

AVAILABLE: Library of Congress

Card 3/3

49-58-4-5/18

AUTHOR:   Melamud, A. Ya.

TITLE:    Transients in Seismic Prospecting Apparatus (O perekhodnykh
          protsessakh v seysmorazvedochnoy apparature)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya,
          1958, Nr 4, pp 471-485 (USSR)

ABSTRACT: Ricker's work (Ref.17) is extended, using Fourier integral
          and Duhamel operational methods and assuming ideal resonant
          characteristics in the receiver plus a rather simplified in-
          put wave-form, to derive the standard results for systems
          showing a transient response, namely, that if the input lasts
          for a time less than the reciprocal of the pass-band width
          dynamic (transient) parameters have to be used in the calcu-
          lations, and if longer, then steady-state ones. There are 9
          figures and 19 references, of which 6 are English, 1 German,
          and 12 Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut Fiziki Zemli (Academy of
          Sciences USSR, Institute for Studying the Physics of the Earth)

SUBMITTED: July 12, 1957.

          1. Geophysical prospecting—Equipment    2. Seismographs—Performance
          3. Mathematics
Card 1/1

MELAMUD, A. Ya., Candidate Phys-Math Sci (diss) -- "Transitory processes in

seismic prospecting equipment". Moscow, 1959.  9 pp (Acad Sci USSR, Inst of

Phys of the Earth im O. Yu. Shmidt), 125 copies (KL, No 24, 1959, 126)

PHASE I BOOK EXPLOITATION                    SOV/3560

Akademiya nauk SSSR.  Institut fiziki zemli

Seysmicheskaya razvedka (Seismic Prospecting)  Moscow, Izd-vo AN SSSR, 1959.
    374 p.  (Series:  Its:  Trudy, No. 6 /173/)  Errata slip inserted.  1,500 copies
    printed.

Ed.:  I.S. Berzon, Doctor of Physical and Mathematical Sciences; Ed. of Publishing
    House:  L.I. Ratnikova; Tech. Ed.:  V.V. Volkova.

PURPOSE:  The publication is intended for geologists and geophysicists, particularly
    for those interested in the study of seismic waves and their use  in geological
    prospecting.

COVERAGE:  This is a collection of 17 articles  published by the Academy of Sciences
    USSR  as transactions of the Institute of Physics of the Earth.  The first four
    articles present mainly an analysis of amplitudinal properties of waves.  The
    second group of four articles deals with problems of frequency analysis of
    seismic waves.  The remaining articles cover a wide field of problems in seis-
    mology  such as  methods of interpretation of dynamic properties of waves,

Card 1/4

Seismic Prospecting                                          SOV/3560

   observation of reflected latitudinal waves, design of high-frequency seismic
   instruments, etc. References are given at the end of each article.

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Card 2/4

Seismic Prospecting

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Seismic Prospecting                                          SOV/3560

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AVAILABLE:  Library of Congress

Card 4/4
                                                            TM/mas
                                                            5-16-60

SOV/49-59-2--/25

AUTHORS:Melamud, A. Ya., Khudzinskiy, L. L., Dernega S. A.

TITLE:    Station of Intermediate Magnetic Recording of Seismic Waves
          (Stantsiya promezhutochnoy magnitnoy zapisi seysmicheskikh
          kolebaniy)

PERIODICAL: Izvestiya Akademii nauk SSSR Seriya geofizicheskaya,
          1959, Nr 2, pp 197-209 and 4 plates (USSR)

ABSTRACT:  A detailed project of a station for the intermediate
          recording of seismic waves on a magnetic wave recorder is
          described. The main divisions of such a station are.
          1) 9-channel magnetic recorders and reproducers. 2) the
          apparatus for filtering, 3) the points of frequency analysis
          of seismic waves, 4) the general control and the power pack
          (accumulators dry batteries and a generator of total power
          300 W). Fig 1 represents a general layout of the station
          where  I - tape recorder,  II - device for printing and
          recording the time  III - oscillograph for frequency
          analysis points,  A - seismographs,    D - amplifiers of
          the seismic (bottom) and magnetic (top) recordings,  V -
          amplifiers of reproducers. The detailed plan of the station

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SOV/49-59-2-4/25

Station of Intermediate Magnetic Recording of Seismic Waves

is shown in Fig 2, where  A - seismograph,  : - amplifier
of magnetic recording (Fig 3 shows its frequency and voltage),
V - multi-channel type recorder,  G - reproduction amplifier,
 D - seismic amplifier, Ye. - seismic oscillograph,  Zn  and  Z
- circuits for indexing               and printing the
seismograms.  The characteristic frequencies of the station
are shown in Fig 4a and Fig 4b  (A - low frequency filtration,
B - high frequency filtration).  The numbers 1, 2, 3 denote
the frequency characteristics of the: 1 -register: reproduct-
ion track, 2 - seismic amplification, $III^3$ - intermediate
magnetic recording.  The experimental station was employed
in 1957 by the expedition of the Institute of Physics of the
Earth, Academy of Sciences USSR, in their investigations on
the nature and dynamical properties of the multiple reflected
waves.  The fidelity of the magnetic recordings was excellent,
which can be seen in Fig 5, showing the 9 tracks:  a - seis-
mogram - reproduction, and  b - magnetic recording.  The
effect of the channels on each other was negligible (Fig.6).
The identity of the recordings is further shown in Fig 7,
where 2 pairs (a and b) of the original seismograms and the
reproductions from the tape recorder are shown.  Figs 8 and 9
give some examples of the results obtained by means of the

Card 2/3

SOV/49-59-2-4/25

Station of Intermediate Magnetic Recording of Seismic Waves

magnetic recordings. The station was able to register the
seismic waves from 20 to 500 h, i.e. it could be employed
in the low, medium and high frequency seismic prospecting.
The apparatus described does not introduce any distortion,
therefore it can be used for the determination of the dynami-
cal characteristics of seismic waves. There are 9 figures
and 35 references; 17 of the references are Soviet, 15 are
English, 2 Italian.

ASSOCIATION: Akademiya nauk SSSR. Institut fiziki Zemli (Academy of
Sciences USSR. Institute of Physics of the Earth)

SUBMITTED: February 5, 1958.

Card 3/3

MELAMUD, A.Ya.; SHIPILIN, N.S.

High frequency seismic apparatus.   Trudy Inst.fiz.zem.
no.6:336-353  '59.                   (MIRA 13:5)
          (Seismometry)

MELAMUD, A.Ya.; DEYNEGA, G.A.

Dynamic range. noise level, detonation of magnetic recorder,
and nonlinear distortions on the AFMZ-CHM apparatus. Razved.
geofiz. no.3:3-13 '65.                                    (MIRA 18:8)

L 13863-66    EWT(1)/EWA(h)    GW

ACC NR:  AT6004101        (N)        SOURCE CODE:  UR/3152/65/000/008/0026/0033

AUTHOR:  Melamud, A. Ya.; Kurilov, A. S.

ORG:  none

TITLE:  Semiconductor modulator and demodulator for magnetic recording using the frequency modulation method

SOURCE:  Razvedochnaya geofizika, no. 8, 1965, 26-33

TOPIC TAGS:  seismologic instrument, frequency modulation, magnetic recording, multivibrator, electronic amplifying equipment, seismic wave

ABSTRACT:  A brief description is given of recording and reproduction amplifiers developed in 1963-1964 at the Institute of Physics of the Earth AN SSSR for FM recording of seismic vibrations. The recording amplifier consists of three amplification stages and a cathode follower (preamplifier), a multivibrator, switch and output matching amplifier.  The three amplification stages and the cathode follower use vacuum tubes, while the multivibrator, switch and output matching amplifier are transistorized.  An input transformer is connected to the input of the preamplifier

Card 1/3

L 13865-66
ACC NR: AT6004101                                                      0

during operation in field conditions.  Selection of the transistors is noncritical
except in the case of the multivibrator where the gain and collector current must be
paired with an accuracy of ±5%.  After preamplification, the seismic signal is fed
through the cathode follower and resistors to the bases of the transistors in the
multivibrator.  The frequency of the oscillations generated by the multivibrator is
proportional to the amplitude of the signal.  Curves are given for the modulation
characteristics of the multivibrator.  These curves show that a deviation in fre-
quency of 50% is possible within the limits of linearity.  The amplitude of a signal
causing a 50% deviation should be 2.8 v.  The output matching stage provides a re-
cording current of 4.5-7 ma when a power supply of 12 v is used in a working fre-
quency range of 1200-4200 cps.  Two modifications of the output matching amplifier
are given.  The reproducer-demodulator amplifier is completely transistorized and
consists of an emitter-follower at the input, a three-stage preamplifier, a key,
integrator, low frequency filter and matching emitter-follower with a discrete sen-
sitivity regulator in the emitter circuit.  Selection of the transistors is non-
critical, however the resistors in the key should be chosen in the 300-400 ohm
range for compensation of scatter in parameters.  The signal from the magnetic head
is preamplified and fed to the key which operates as in the recording amplifier for
shaping FM oscillations similar to those received from the modulator.  The amplifier

Card 2/3

L  13863-66
ACC NR:  AT6004101                                                    0

shapes the signal reliably when the amplitude of the oscillations at the input is
100 µv and higher.  The shaped pulse is fed to the integrator circuit and from there
to the matching emitter-follower.  For a power supply of 6 v and a frequency devia-
tion of 50%, the voltage of the undistorted seismic signal at the output of the de-
modulator is 130 mv.  The technical characteristics of the amplifiers are given.
Power is supplied from six-volt storage batteries with current requirements of 10 ma
for the modulator and 7 ma for the demodulator.  Orig. art. has:  7 figures.

SUB CODE:  09,08/  SUBM DATE:  00/  ORIG REF:  005/  OTH REF:  000

Card  3/3   BK

ACC NR: AT6000091                          SOURCE CODE: UR/2619/64/000/035/0103/0109

AUTHOR: Melamud, A. Ya.; Ayzman, Yu. A.                                              38
                                                                                     B+1
ORG: Institute of Physics of the Earth im. O.Yu. Shmidt, AN SSSR (Institut fiziki
zemli AN SSSR)
TITLE: APMZ-ChM station for the intermediate magnetic recording of seismic vibrations

SOURCE: AN SSSR. Institut fiziki zemli. Trudy, no. 35, 1964, 103-109

TOPIC TAGS: seismologic station, seismography, seismologic instrument, seismic wave

ABSTRACT: The APMZ-ChM is an intermediate-range, frequency-modulation, magnetic
recorder. Technical characteristics are: 35 channels; range of frequencies, 5-400
cps; dynamic range, not less than 46 decibels (without EPU receiver); nonlinear dis-
tortion of not more than 3% with 46-decibel dynamic range; 35-mm, type 2 magnetic
tape on diacetate base moves at 380.15 mm/sec. The station is powered by 6-, 12-,
or 24-volt dry-cell batteries (photograph, general schematic, schematics for recorder-
modulator, kinematic circuit of magnetic recorder, semiconductor timing fork of
generator, reproducer-demodulator amplifier are given). Orig. art. has: 7 figures.
/FSB: v. 1, no. 5/

SUB CODE: ES / SUBM DATE: none / ORIG REF: 002

Card 1/1

09010469

ACC NR: AT7003285                    SOURCE CODE:  UR/3152/66/000/014/0003/0009

AUTHOR:  Melamud, A. Ya.

ORG:  None

TITLE:  Monitoring the sensitivity of seismic prospecting equipment

SOURCE:  Razvedochnaya geofizika, no. 14, 1966, 3-9

TOPIC TAGS:  seismic prospecting, seismic wave, seismograph, seismography, geologic instrument, measuring instrument, seismologic instrument, frequency characteristic, phase analysis

ABSTRACT:  A method for testing the operation of seismic equipment, based on the realization that the equipment functions in a pulse mode in actual practice, so that the sensitivity, and other parameters of seismic equipment in transient modes is of importance, is described.  The method is based on determination of the dynamic characteristics of the equipment.  The signals used to test equipment sensitivity are described, as is the manner in which a set of oscillograms is used to evaluate the amplitude and frequency characteristics of various phases of the seismic waves recorded.  The evaluation process includes: 1) production of dynamic characteristics;

Card 1/2

ACC NR: AT7003285

2) the determination of time of arrival of seismic wave phases being evaluated from seismograms; 3) determination of equipment sensitivity from dynamic frequency characteristics.  Orig. art. has:  9 formulas and 3 figures.

SUB CODE: 08/SUBM DATE: None/ORIG REF: 007

Card  2/2

LIVSHITS, B.S.; MELAMUD, E.A.;YELEKOYEVA, E.K.; MOVSHOVICH,
        I.Kh.; KHANIN, G.B.; PODVIDZ, M.M., dots.; METEL'SKIY,
        G.B., otv. red.; OBRAZTSOVA, Ye.A., red.

[Rural crossbar automatic exchange K-100/2000] Sel'skaia
koordinatnaia ATS K-100/2000; informatsionnyi sbornik.
Moskva, Sviaz', 1965. 136 p.            (MIRA 18:11)

1. Nauchno-issledovatel'skiy institut gorodskoy i sel'skoy
telefonnoy svyazi Ministerstva svyazi SSSR (for all except
Metel'skiy, Obraztsova).

AFANAS'YEV, A.V.; BUGROVSKIY, P.I.; PETUKHOV, M.S.; ELKIN, N.I.;
    KITNITSKIY, N.Ya.; SHEYMA, V.D.

    Binding concentrates for leather finishing containing a new
    synthetic binding agent substituting for casein. Kozh.-obuv.
    prom. 7 no.8:11-14 Ag '65.                      (MIRA 18:10)

CHERNOV, V.I., dotsent; OSNOS, M.L., dotsent; MELAMUD, M.Ya.;
        YANKELEVICH, Ya.Kh.

    Dispanseries in the control of cardiovascular diseases in the
    city of Lvov. Nauch.trudy L'vov.obl.terap.ob-va no.1:10-15 '61.
                                                    (MIRA 16:5)

    1. L'vovskiy gorodskoy otdel zdravookhraneniya (zav. otdelom –
    Ya.I. Skibel').
                (LVOV—HOSPITALS—OUTPATIENT SERVICES)
                (LVOV—CARDIOVASCULAR SYSTEM—DISEASES)

MONASTYRSKIY, R.Ya (L'vov); OSNOS, M.L., dotsent (L'vov); MELAMUD, M.Ya.
    (L'vov); YANKELEVICH, Ya.Kh. (L'vov); SIROMAKHA, G.M. (L'vov)
    KOPEL'MAN, Ye.Sh. (L'vov); KRASNOVA, S.B. (L'vov); BANAKH, R.D.
    (L'vov)

Organization of rheumatic fever control. Klin. med. 40 no.11:
89-93 N'62                                    (MIRA 16:12)

1. Iz L'vovskogo oblastnogo otdela zdravookhraneniya (zav. -
R.Ya. Manastyrskiy).

MELAMUD, Ye.Ya. (Odessa)

Use of the semicrou method in studying the boundedness of solutions
to a linear partial diffusio. kata nbro. 68 no.2:228-243 '65.

(MIRA 18:10)

TSAREVSKIY, A.M.; MELAMUT, D.L., kand.tekhn.nauk

One-sided hydraulic-fill construction of dams without protective
facing of the upstream slope.  Gidr. i mel. 12 no.9:23-28 S '60.
(MIRA 13:9)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh
nauk im. Lenina (for TSarevskiy).
(Tedzhen Reservoir—Dams)

MELAMUD, E.A.

New equipment of a rural automatic telephone exchange. Vest. sviazi.
24 no.6:16-18 Je '64.                                    (MIRA 17:11)

1. Nachal'nik laboratorii Nauchno-issledovatel'skogo instituta gorod-
skoy i sel'skoy telefonnoy svyazi.

LIVSHITS, L.Ya.; MELAMUD, E.Ye. (Saratov)

Treatment of multiple aneurysms of the middle cerebral artery
complicated by intracerebral hemorrhage. Vop.neirokhir.  no.2:
48-49 '62.                                        (MIRA 15:3)

1. Otdeleniye neyrokhirurgii Saratovskogo nauchno-issledovatel'-
skogo instituta travmatologii i ortopedii.
        (INTRACRANIAL ANEURYSMS)   (BRAIN—HEMORRHAGE)

MELAMUD, G., inzhener.

Using electric vibrators for stirring up flour and bran in bins.
Muk.-elev.prom. 22  no.2:27  F '56.                    (MLRA 9:6)

1.Chkalovskaya mel'nitsa No.5.
          (Bins) (Flour--Storage)

BUKSHTAM, M.; MELAMUD, G.

Scientific and technical organizations of grain elevators and mills
are striving for technical progress. Muk.elev.prom. 27 no.5:19-20
My '61.
(MIRA 14:6)

1. Zamestitel' predsedatelya Tul'skogo oblastnogo pravleniya nauchno-
tekhnicheskogo obshchestva (for Bukshtam). 2. Predsedatel' Oren-
burgskogo pravleniya nauchno-tekhnicheskogo obshchestva (for Melamud).
(Grain-handling machinery)
(Grain-milling machinery )

MELAMUD, G., inzh.

    Electric power supply of grain receiving stations in Orenburg
    Province. Muk.-elev. prom. 28 no.10:3-5 O '62.    (MIRA 16:1)

    1. Orenburgskoye upravleniye khleboproduktov.
                 (Orenburg Province—Grain elevators)
                 (Electric power supply to apparatus)

AUTHOR:     Melamud, G.S.

TITLE:      Electrical Conveyor-type Furnaces for Firing Enamelware (Elektri-
            cheskiye konveyyernyye pechi dlya obzhiga emalirovannoy posudy)

PERIODICAL:  Tr. Nauch.-tekhn. o-va chernoy metallurgii, 1956, Vol 7, pp
             489-495.  Comments pp 506-511

ABSTRACT:    The firing of enamelware was formerly performed in low-output
             nonmechanized muffle furnaces (F) with high fuel consumption and
             low-quality firing.  Since 1951 the plant has been building and has
             perfected, for the firing of such ware, the use of electrical con-
             veyor-type F in the form of a U-shaped horizontal tunnel of fireclay
             brick with fireclay foam insulation, within which multi-level racks,
             containing the ware covered by the slip, move along, suspended
             from a conveyor placed above the crown.  The speed of the conveyor
             is automatically controlled in relation to the F temperature; it is
             from 1 to 4 m/min with D-C electric drive, with a controlled num-
             ber of revolutions.  The firing F consists of a heat-exchange zone
Card 1/2     where the products are dried and preheated by the warmth of the

SOV/137-57-6-9570

Electrical Conveyor-type Furnaces for Firing Enamelware

products previously fired, and of a firing zone divided in half by a longitudinal brick wall. F for firing the coating composition are equipped with 5, and those for firing the enamel with 7 electrical heaters of elements of Kh20N80 or Kh15N60 strip nichrome along the walls and floor, the total installed power being, respectively, 1090 and 1190 kw. Graphs of temperature distribution and power consumption per element in the firing of the coating composition are adduced. F heat balances are presented, including on the intake side the heat emitted by the fired products and equipment in the heat-exchange zone with a product-heating efficiency of 18.3% in F Nr 1 and 20.1% in F Nr 2, heat loss being up to 32-34% of the total heat consumption. F output rate exceeds the planned level by 150%, and the production of enamelware at the plant rose by 225% over 1950, with good-quality firing and considerable saving in labor.

V.G.

Card 2/2

MELAMUD, G.S.

133-9-19/23

AUTHOR:    Ustinov, G. Ya. and Melamud, G.S., Engineers.

TITLE:     Enamel-firing Furnaces on the Lys'va      Works. (Emaleob-
           zhigatel'nyye pechi lys'venskogo zavoda)

PERIODICAL:  Stal', 1957, No.9, pp. 847 - 849 (USSR)

ABSTRACT:   Electric conveyor and chamber furnaces used for firing
            enamelled ware on the Lys'va      Works are described and their
            operation is compared with fuel-fired furnaces.
            There are 2 tables and 3 figures.

AVAILABLE:   Library of Congress.

Card 1/1

MELAMUD, M.G.

Chernov, V.I., Red'ko, Z.Yu., and Melamud, M.G.  "On defects in the work of the spa-selection commission", Vracheb. delo, 1949, No. 1, paragraphs 75-78.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

AFANAS'YEV, A.V.; BLOSHTEYN, F.I.; Prinimali uchastiye: LANGOVAYA, N.Kh.;
MELAMUD, M.L.

Use of molybdate chrome orange for leather finishing.  Lakokras.-
mat.i ikh prim.  no.6:73-74  '62.                          (MIRA 16:1)

1. Proyektno-konstruktorskoya i tekhnologicheskoye byuro
Upravleniya kozhevenno-obuvnoy i mekhovoy promyshlennosti
Leningradskogo soveta narodnogo khozyaystva.
                        (Dyes and dyeing--Leather)

MANASTYRSKIY, R.Ya.; CHERNOV, V.I.; STUKALO, I.T.; OSNOS, M.L.; MELAMUD, M.Ya.
    (L'vov)

Certification for specialists in internal medicine. Vrach.delo no.7:
735 Jl '59.                                              (MIRA 12:12)
        (LVOV PROVINCE--MEDICINE--LAWS AND LEGISLATION)

MELAMUD, M.Ya.; FISHBEYN, A.V. (L'vov)

Atypical course of a relapse in hypernephroid cancer. Klin.
med. 40 no.10:123-126 O '62.                        (MIRA 15:12)

1. Iz L'vovskoy gorodskoy bol'nitsy No.1 (glavnyy vrach – kand.
med.nauk N.K.Doronina).
                    (KIDNEYS--CANCER)

MELAMUD, N.L., inzh.; RYZHOVA, T.P.

Inspection of dilatometers and taking the volumetric expansion of water into account in connection with the dilatometric analysis of oils and fats. Masl.-zhir.prom. 28 no.9:33-34 S '62.
(MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Dilatometer) (Oils and fats—Analysis)

MELAMUD, S. Z.

Solubility of lithium chloride and nitrate in some mixed solvents. A. G. Sarkisov and S. Z. Melamud. Sbornik Nauch. Trudov Kuibyshev. Ind. Inst. 1953, No. 4, 199-209. — The soly. of LiCl was studied in mixts. of $H_2O$-$CH_3COCH_3$, $CH_3COCH_2$-$C_2H_5OH$, $C_2H_5OH$-$H_2O$, $H_2O$-dioxane, and dioxane-iso-$C_2H_5OH$, and also the soly. of LiCl + LiNO$_3$ in dioxane-iso-$C_5H_{11}OH$. An attempt was made to relate the soly. of LiCl to the dielec. properties of the solvents. For $H_2O$ having a dielec. const. of 81 the soly. of LiCl reaches 50%, whereas for dioxane having a dielec. const. of 2.23 the soly. is practically 0. For a binary mixt. of solvents the soly. depends on the additively combined dielec. properties of the mixed solvents. However, this rule did not hold in a no. of cases. $CH_3COCH_3$ and $C_2H_5OH$, having dielec. consts. 21.5 and ?.?, resp., dissolved LiCl to the same extent. Iso-$C_5H_{11}OH$, having a dielec. const. 5.7, dissolved LiCl better than did $CH_3COCH_3$ and $C_2H_5OH$. In very small dilns., the additivity rule did not hold. The highest soly. of LiCl + LiNO$_3$ was observed in mixts. with a high content of iso-$C_5H_{11}OH$; this is attributed to the higher dielec. const. of the mixed solvents. — M. Hoseh

ZAYTSEV, R.V., inzhener; MELAMUD, Ya.G., inzhener.

Artificial diversion of run-off between small streams. Transp.stroi.
5 no.8:22-23  O '55.                                    (MLRA 9:1)
                    (Hydraulic engineering)

CHERNYKH, V.I., inzh.; MELAMUD, Ya. G., inzh.

Using the intersection method in pegging out circular curves.
Transp. stroi. 8 no. 7:29 Jl '58.                    (MIRA 11:7)
(Railroads--Surveying)
(Railroads--Curves and turnouts)

KABANOV, Vladimir Fedorovich; KRISHTAL', Il'ya Samoylovich; MALINOVSKAYA,
Mariya Lavrent'yevna; MELAMUD, Yefim Yakovlevich; ROZENBLYUM, Yefim
Grigor'yevich; MOSHAROVA, T.P., red.; TIKHONOVA, Ye.A., tekhn. red.

[Handbook of time norms for lathework in ship repairing] Spravochnik
norm i normativov vremeni na tokarnye raboty v sudoremonte. Moskva,
Izd-vo "Morskoi transport," 1961.  301 p.                (MIRA 14:12)
    (Turning)   (Ships--Maintenance and repair)

MELAMUD, Z.; OVCHINNIKOV, N.

[Organization of payment and credit operations of collective farms through
the bank] Oformlenie raschetnykh i kreditnykh operatsii kolkhozov cherez
bank. Moskva, Gosfinizdat, 1953. 57 p.                     (MLRA 6:11)
                    (Collective farms--Accounting) (Agricultural credit)

MELAMUD, Z.

Expanding credit relations with heavy industry.  Den. i kred.
14 no.12:8-10 D '56.                                      (MLRA 10:2)

(Russia--Industries) (Credit)

MEIAMUD, Z.

Credit relations between the bank and heavy-industry enterprises.
Den.i kred. 17  no.5:40-44  My  '59.          (MIRA 12:10)
                (Moscow Province—Credit)

TSAREVSKIY, A.M., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk;
    MELAMUT, D.L., inzhener.

    Filling earth dams in river beds without first cutting off the current with a
    stone barrier.  Gidr.i mel. 5 no.12:30-42 D '53.                (MIRA 6:11)
                                                                    (Dams)

MIKHEYEV, P.V., kandidat tekhnicheskikh nauk; MELAKUT, D.L., inzhener.

Instream surfacing of river beds with alluvial soil.  Gidr.stroi. 22 no.11:
6-10 N-D '53.                                                    (MLRA 6:11)
                                        (Hydraulic engineering)

MELAMUT, D. L.

"The Spanning of River Beds by the Hydromechanization Method."
Cand Tech Sci, All-Union Sci Res Inst of Hydraulic Engineering
and Soil Improvement, Moscow, 1954. (RZhMekh, Mar 55)

So: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

MELAMUT, David Lazarevich; KOBYLYAKOV,L.M., redaktor; PEVZNER,V.I., tekhni-
cheskiy redaktor; TSAREVSKIY,A.M., redaktor; PAVLOVA,M.M., tekhni-
cheskiy redaktor

[Damming rivers by hydromechanical means] Perekrytie rek sposobom
gidromekhanizatsii. Moskva, Gos.izd-vo selkhoz.lit-ry. 1955. 151 p.
(Dams)                                        (MLRA 9:3)

MELAMUT, D.L.

AID P - 1747

Subject    : USSR/Hydraulic Engineering Construction

Card 1/1    Pub. 35 - 6/21

Author    : Melamut, D. L. and Kopiyevskiy, K. P.

Title    : Damming of the Dnestr River with earthfill without rock toe

Periodical : Gidr. stroi., v.24, no.2, 13-20, 1955

Abstract  : The carrying out of earthfill work and the settling of
            particles in the damming of the Dnestr River at the
            Dubossary Power Plant construction is discussed in detail
            with the help of tables and equations. Some data on
            flow and soil mechanics are included. A description of
            the hydraulic fill equipment used is given. The process
            of earthfill damming of rivers without a preliminary
            construction of the rock toe walls is recommended.
            Seven diagrams and 3 photos are given.
Institution: None

Submitted  : No date

MIKHEYEV, P.V., dokter tekhnicheskikh nauk; MELAMUT, D.L., kandidat tekhnicheskikh
    nauk.

    Damming of the Missouri channel by the hydraulic fill method. Gidr. i
    mel. 8 no.8:56-58 Ag '56.                                    (MLRA 9:9)
                (Missouri River--Dams)

ZIMIN, A.N., inzhener.;MELAMUT, D.L., kandidat tekhnicheskikh nauk.

Filling in the bed of the Terek River in connection with building
the Kargalinskaya hydraulic development. Gidr. i mel. 8 no.11:
25-35 N '56.                                    (MLRA 10:4)
          (Terek River--Dams) (Earthwork)

*Л Е Л А И ,Л 1, Д Л.*

AUTHOR:      Melamut, D.L., Candidate of Technical Sciences   99-58-6-8/11

TITLE:       On the Barring of Large Rivers by Silting Methods (O perekry-
             tii mnogovodnykh rek namyvnym sposobom)

PERIODICAL:  Gidrotekhnika i Melioratsiya, 1958, Nr 6, pp 50-54 (USSR)

ABSTRACT:    In this article the author refutes the statements advanced by
             Engineer I.A. Shneyer in an article published in Nr 12 of this
             journal, 1956, " Transporting Capacity of Barred River Beds".
             He shows that the conclusions drawn by Engineer Shneyer on the
             barring of the Dnepr river bed at the Kakhovka GES and the
             Volga river bed at the Kuybyshev GES, are not supported by
             experimental evidences.  The actual data on these experiments
             shows that the narrowing of the bed up to the outlet channel
             can be carried out at any rate by silting.  Thus, the outlet
             channel can be blocked by dropping the level to 0.3 or 0.4
             depending on the quantity and size of the silting sand.  The
             barring of large rivers by hydro-mechanical means is capable
             of maintaining the flow of the river during the low-water
             period with a lateral derivation.  While narrowing the Dnepr
             river bed by hydro-mechanical means as the flood subsided
Card 1/2     (Q=4800 to 2300 $m^3$/sec and v = 2.06 m/sec), at a soil conveyance

On the Barring of Large Rivers by Silting Methods          99-58-6-8/11

rate of 14 to 58,000 $m^3$ within 24 hours, the created turbidity exceeded the carrying capacity of the current by many times. A deposition of about 30% of the soil volume assured the compression of the river bed.  There are three figures, one table, and 1 Soviet reference.

AVAILABLE:     L ibrary of Congress

Card 2/2       1.  Rivers-Control

Melamut, D.L.

10(4)
AUTHOR: Rozinoer, S.I., Chairman
TITLE: Conference on Scientific Research in the Field of Hydromechanics

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 7, pp 62-65 (USSR)

ABSTRACT: The article is a chronicle of the above-named conference, which was held in Moscow from April 15-17, 1959, on the initiative of the coordinatory commission for hydromechanization in the Council for Hydraulic affairs of the Academy of Sciences of the USSR. The All-Union MSES Hydromechanization Trust, the Mining Institute of the Academy of Sciences of the USSR and the Moscow oblast board of the Technological Department of the construction industry also participated in the organisation of the conference, which was attended by more than 400 representatives of 149 organizations, including the Offices of State Construction of the USSR, ministries, national economic councils, institutes of the Academy of Sciences of the USSR and the union republics, the ASiA of the USSR and the Ukrainian SSR, the Academies of Agricultural Science and the GMPK of the union republics, and official scientific and research institutes. The conference was opened by Academician A.M. Terpigorev, and at the plenary session papers were read by the following: Prof.

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A.I. Lutin, Doctor of Technical Sciences: "The State of Scientific Research Work in the Field of Hydromechanization"; Engineer V.A. Platonov, "The Construction of Alluvial Dams and the Work of Scientific Organizations"; Engineer N.A. Gorin; "The Present State of and the Outlook for Design and Research Work in the Field of Equipment for Hydromechanisation"; Engineer S.B. Fogelman, "Certain Problems of the Economy of the Hydromechanization of Earth Works"; Prof. G.A. Nurok, Doctor of Technical Sciences. "The Present State of and the Outlook for the Development of the Hydromechanization of Opencast Coalmining"; Engineer B.M. Shkundin: "Means of Perfecting Hydromechanization in the Non-Metallic Mineral Industry." The remainder of the conference was divided into 3 sessions: on technology with equipment and transport. At the session dealing with technology papers were read by the following: Prof. N.N. Maslov, Doctor of Technical Sciences: "Certain Problems in the Planning of Alluvial Dams"; N.A. Ivanov, Candidate of Technical Sciences (Institute of Mechanics of the Academy of Sciences of the USSR): "Peculiar Features of the Dilution and Compression of Sand Foundations"; P.D. Evdokimov, Candidate of Technical Sciences (VNIIGS): "Processeal Alluvial Construction"; V.A. Melenteyev (VNIIG) and L.P. Spiridin, Candidate of Technical Sciences (B.E. Vedeneyev VNIIG) and L.P.: "The Consolidation and Compression of the Foundations of the Key Parts of Earth Dams"; I.I. Kolpashnikov (GISI), "Research on Alluvial Construction by Means of Cohesive Foundations: The Hydraulic Construction of Earthworks by Means of Loess Foundations"; B.L. Tolynin (Y.Y. Lukyshev MISI): "The Alluvial Construction of the Sary-Isaynak dam on the Murgab River by Means of Fine-Grained Sand"; I.Ya. Rusinov, Candidate of Technical Sciences (A.P. Morhatsky VVIA): "Research into the Morphological Peculiarities of Sand Foundations"; Engineer A. Shneyer (SAOGIDEP), and I.I. Lukovtov (TSIIGiM): "Formulae for the Determination of the Angle of Inclination of Earth Foundations"; M.Y. Zolotarov, Candidate of Technical Sciences: "A Method of Calculating the Thawing Rate of Frozen Foundations on the Upper Slope of Sand Dams when Constructed in Winter; D.L. Melamut, Engineer K.P. Kopiyevskiy (GNII of the Moldavian SSR): "Problems of Spanning Rivers Without the Use of Bankirs";

Card 3/6